

0051754

Thermo Nutech
W.O. No. N9-07-122-7731

Bechtel Hanford Inc.
SDG H0471

Case Narrative

1.0 GENERAL

Bechtel Hanford Inc. Sample Delivery Group H0471 is composed of twenty solid (soil) samples designated under SAF No. B99-004 with a Project Designation of: 100 D Areas-Quick Turn.

The samples were received as stated on the Chain-of-Custody documents. Any discrepancies are noted on the TNU Sample Receipt Checklist. The results were transmitted to Bechtel Hanford via facsimile and E-Mail on July 28, 1999.

2.0 ANALYSIS NOTES

2.1 Gamma Scan Analyses

Not all of the RDL's for all of the samples were achieved. No other problems were encountered during the course of the analyses.



TMA/RICHMOND
SAMPLE DELIVERY GROUP H0471

SAMPLE SUMMARY

SDG 7731
Contact L.A. Johnson

Client Hanford
Contract TRB-SBB-207925
Case no SDG-H0471

CLIENT SAMPLE ID	LOCATION	MATRIX	LEVEL	LAB SAMPLE ID	SAF NO	CHAIN OF CUSTODY	COLLECTED
B0VYV0	100D	SOLID		N907122-01	B99-004	B99-004-100	07/20/99 12:30
B0VYV1	100D	SOLID		N907122-02	B99-004	B99-004-100	07/20/99 12:33
B0VYV2	100D	SOLID		N907122-03	B99-004	B99-004-100	07/20/99 12:35
B0VYV3	100D	SOLID		N907122-04	B99-004	B99-004-100	07/20/99 12:38
B0VYV4	100D	SOLID		N907122-05	B99-004	B99-004-100	07/20/99 12:40
B0VYV5	100D	SOLID		N907122-06	B99-004	B99-004-100	07/20/99 12:42
B0VYV6	100D	SOLID		N907122-07	B99-004	B99-004-100	07/20/99 12:45
B0VYV7	100D	SOLID		N907122-08	B99-004	B99-004-100	07/20/99 12:48
B0VYV8	100D	SOLID		N907122-09	B99-004	B99-004-100	07/20/99 13:00
B0VYV9	100D	SOLID		N907122-10	B99-004	B99-004-100	07/20/99 13:03
B0VYW0	100D	SOLID		N907122-11	B99-004	B99-004-101	07/20/99 13:05
B0VYW1	100D	SOLID		N907122-12	B99-004	B99-004-101	07/20/99 13:08
B0VYW2	100D	SOLID		N907122-13	B99-004	B99-004-101	07/20/99 13:10
B0VYW3	100D	SOLID		N907122-14	B99-004	B99-004-101	07/20/99 13:20
B0VYW4	100D	SOLID		N907122-15	B99-004	B99-004-101	07/20/99 13:23
B0VYW5	100D	SOLID		N907122-16	B99-004	B99-004-101	07/20/99 13:25
B0VYW6	100D	SOLID		N907122-17	B99-004	B99-004-101	07/20/99 13:28
B0VYW7	100D	SOLID		N907122-18	B99-004	B99-004-101	07/20/99 13:30
B0VYW8	100D	SOLID		N907122-19	B99-004	B99-004-101	07/20/99 13:45
B0VYW9	100D	SOLID		N907122-20	B99-004	B99-004-101	07/20/99 13:55
Method Blank		SOLID		N907122-22	B99-004		
Lab Control Sample		SOLID		N907122-21	B99-004		

SAMPLE SUMMARY

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Lab id TMANC
Protocol Hanford
Version Ver 1.0
Form DVD-CS
Version 3.06
Report date 07/28/99

TMA/RICHMOND
SAMPLE DELIVERY GROUP H0471

SDG 7731
Contact L.A. Johnson

QC SUMMARY

Client Hanford
Contract TRB-SBB-207925
Case no SDG-H0471

QC BATCH	CHAIN OF CUSTODY	CLIENT SAMPLE ID	MATRIX	% SOLIDS	SAMPLE AMOUNT	BASIS AMOUNT	DAYS SINCE RECEIVED	LAB COLL	LAB SAMPLE ID	DEPARTMENT SAMPLE ID
7731	B99-004-100	B0VYV0	SOLID				07/22/99	2	N907122-01	7731-001
		B0VYV1	SOLID				07/22/99	2	N907122-02	7731-002
		B0VYV2	SOLID				07/22/99	2	N907122-03	7731-003
		B0VYV3	SOLID				07/22/99	2	N907122-04	7731-004
		B0VYV4	SOLID				07/22/99	2	N907122-05	7731-005
		B0VYV5	SOLID				07/22/99	2	N907122-06	7731-006
		B0VYV6	SOLID				07/22/99	2	N907122-07	7731-007
		B0VYV7	SOLID				07/22/99	2	N907122-08	7731-008
		B0VYV8	SOLID				07/22/99	2	N907122-09	7731-009
		B0VYV9	SOLID				07/22/99	2	N907122-10	7731-010
	B99-004-101	B0VYW0	SOLID				07/22/99	2	N907122-11	7731-011
		B0VYW1	SOLID				07/22/99	2	N907122-12	7731-012
		B0VYW2	SOLID				07/22/99	2	N907122-13	7731-013
		B0VYW3	SOLID				07/22/99	2	N907122-14	7731-014
		B0VYW4	SOLID				07/22/99	2	N907122-15	7731-015
		B0VYW5	SOLID				07/22/99	2	N907122-16	7731-016
		B0VYW6	SOLID				07/22/99	2	N907122-17	7731-017
		B0VYW7	SOLID				07/22/99	2	N907122-18	7731-018
		B0VYW8	SOLID				07/22/99	2	N907122-19	7731-019
		B0VYW9	SOLID				07/22/99	2	N907122-20	7731-020
		Method Blank	SOLID						N907122-22	7731-022
		Lab Control Sample	SOLID						N907122-21	7731-021

QC SUMMARY

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TMA/RICHMOND

SAMPLE DELIVERY GROUP H0471

SDG 7731
Contact L.A. Johnson

PREP BATCH SUMMARY

Client Hanford
Contract TRB-SBB-207925
Case no SDG-H0471

TEST	MATRIX	METHOD	PREPARATION ERROR		PLANCHETS ANALYZED				QUALI-		
			BATCH	2σ %	CLIENT	MORE	RE	BLANK		LCS	DUP/ORIG
Gamma Spectroscopy											
GAM	SOLID	Gamma Scan	2851-114	15.0	20			1	1		

Duplicates and Matrix Spikes are those with original (Client) sample in this Sample Delivery Group.

Blank and LCS planchets are those in the same preparation batch as some Client, Duplicate or Spike sample.

PREP BATCH SUMMARY

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TMA/RICHMOND
SAMPLE DELIVERY GROUP H0471

SDG 7731
Contact L.A. Johnson

WORK SUMMARY

Client Hanford
Contract TRB-SBB-207925
Case no SDG-H0471

CLIENT SAMPLE ID		LAB SAMPLE ID									
LOCATION	MATRIX	COLLECTED		SUF-							
CUSTODY	SAF No	RECEIVED	PLANCHET	TEST	FIX	ANALYZED	REVIEWED	BY	METHOD		
B0VYV0		N907122-01	7731-001	GAM		07/26/99	07/28/99	NJV	Gamma Scan		
100D		07/20/99									
B99-004-100	B99-004	07/22/99									
B0VYV1		N907122-02	7731-002	GAM		07/26/99	07/28/99	NJV	Gamma Scan		
100D		07/20/99									
B99-004-100	B99-004	07/22/99									
B0VYV2		N907122-03	7731-003	GAM		07/26/99	07/28/99	NJV	Gamma Scan		
100D		07/20/99									
B99-004-100	B99-004	07/22/99									
B0VYV3		N907122-04	7731-004	GAM		07/26/99	07/28/99	NJV	Gamma Scan		
100D		07/20/99									
B99-004-100	B99-004	07/22/99									
B0VYV4		N907122-05	7731-005	GAM		07/26/99	07/28/99	NJV	Gamma Scan		
100D		07/20/99									
B99-004-100	B99-004	07/22/99									
B0VYV5		N907122-06	7731-006	GAM		07/26/99	07/28/99	NJV	Gamma Scan		
100D		07/20/99									
B99-004-100	B99-004	07/22/99									
B0VYV6		N907122-07	7731-007	GAM		07/26/99	07/28/99	NJV	Gamma Scan		
100D		07/20/99									
B99-004-100	B99-004	07/22/99									
B0VYV7		N907122-08	7731-008	GAM		07/26/99	07/28/99	NJV	Gamma Scan		
100D		07/20/99									
B99-004-100	B99-004	07/22/99									
B0VYV8		N907122-09	7731-009	GAM		07/26/99	07/28/99	NJV	Gamma Scan		
100D		07/20/99									
B99-004-100	B99-004	07/22/99									
B0VYV9		N907122-10	7731-010	GAM		07/26/99	07/28/99	NJV	Gamma Scan		
100D		07/20/99									
B99-004-100	B99-004	07/22/99									

WORK SUMMARY

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TMA/RICHMOND

SAMPLE DELIVERY GROUP H0471

WORK SUMMARY, cont.

SDG 7731
Contact L.A. Johnson

Client Hanford
Contract TRB-SBB-207925
Case no SDG-H0471

CLIENT SAMPLE ID		LAB SAMPLE ID									
LOCATION	MATRIX	COLLECTED		SUF-							
CUSTODY	SAF No	RECEIVED	PLANCHET	TEST	FIX	ANALYZED	REVIEWED	BY	METHOD		
B0VYW0		N907122-11	7731-011	GAM		07/27/99	07/28/99	NJV	Gamma Scan		
100D		07/20/99									
B99-004-101	B99-004	07/22/99									
B0VYW1		N907122-12	7731-012	GAM		07/27/99	07/28/99	NJV	Gamma Scan		
100D		07/20/99									
B99-004-101	B99-004	07/22/99									
B0VYW2		N907122-13	7731-013	GAM		07/27/99	07/28/99	NJV	Gamma Scan		
100D		07/20/99									
B99-004-101	B99-004	07/22/99									
B0VYW3		N907122-14	7731-014	GAM		07/27/99	07/28/99	NJV	Gamma Scan		
100D		07/20/99									
B99-004-101	B99-004	07/22/99									
B0VYW4		N907122-15	7731-015	GAM		07/27/99	07/28/99	NJV	Gamma Scan		
100D		07/20/99									
B99-004-101	B99-004	07/22/99									
B0VYW5		N907122-16	7731-016	GAM		07/27/99	07/28/99	NJV	Gamma Scan		
100D		07/20/99									
B99-004-101	B99-004	07/22/99									
B0VYW6		N907122-17	7731-017	GAM		07/27/99	07/28/99	NJV	Gamma Scan		
100D		07/20/99									
B99-004-101	B99-004	07/22/99									
B0VYW7		N907122-18	7731-018	GAM		07/27/99	07/28/99	NJV	Gamma Scan		
100D		07/20/99									
B99-004-101	B99-004	07/22/99									
B0VYW8		N907122-19	7731-019	GAM		07/27/99	07/28/99	NJV	Gamma Scan		
100D		07/20/99									
B99-004-101	B99-004	07/22/99									
B0VYW9		N907122-20	7731-020	GAM		07/27/99	07/28/99	NJV	Gamma Scan		
100D		07/20/99									
B99-004-101	B99-004	07/22/99									

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TMA/RICHMOND

SAMPLE DELIVERY GROUP H0471

SDG 7731

Contact L.A. Johnson

WORK SUMMARY, cont.

Client Hanford

Contract TRB-SBB-207925

Case no SDG-H0471

CLIENT SAMPLE ID	LAB SAMPLE ID									
LOCATION	MATRIX	COLLECTED		SUF-						
CUSTODY	SAF No	RECEIVED	PLANCHET	TEST	FIX	ANALYZED	REVIEWED	BY	METHOD	
Method Blank		N907122-22	7731-022	GAM		07/27/99	07/28/99	NJV	Gamma Scan	
	SOLID									
	B99-004									
Lab Control Sample		N907122-21	7731-021	GAM		07/27/99	07/28/99	NJV	Gamma Scan	
	SOLID									
	B99-004									

COUNTS OF TESTS BY SAMPLE TYPE

TEST	SAF No	METHOD	REFERENCE	CLIENT	MORE	RE	BLANK	LCS	DUP SPIKE	TOTAL
GAM	B99-004	Gamma Scan	GAMMAHI	20			1	1		22
TOTALS				20			1	1		22

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TMA / RICHMOND
SAMPLE DELIVERY GROUP H0471

N907122-22

Method Blank

METHOD BLANK

SDG <u>7731</u>	Client/Case no <u>Hanford</u>	<u>SDG-H0471</u>
Contact <u>L.A. Johnson</u>	Case no <u>TRB-SBB-207925</u>	
Lab sample id <u>N907122-22</u>	Client sample id <u>Method Blank</u>	
Dept sample id <u>7731-022</u>	Material/Matrix <u>SOLID</u>	
	SAF No <u>B99-004</u>	

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		0.038	0.050	U	GAM
Cesium 137	10045-97-3	U		0.039	0.10	U	GAM
Europium 152	14683-23-9	U		0.053	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.13</u>	0.10	U	GAM
Europium 155	14391-16-3	U		0.047	0.10	U	GAM
Americium 241	14596-10-2	U		0.026		U	GAM

100 D Areas-Quick Turn

QC-BLANK 31334

METHOD BLANKS

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Lab id <u>TMANC</u>
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TMA/RICHMOND
SAMPLE DELIVERY GROUP H0471

N907122-21

Lab Control Sample

LAB CONTROL SAMPLE

SDG <u>7731</u> Contact <u>L.A. Johnson</u> Lab sample id <u>N907122-21</u> Dept sample id <u>7731-021</u>	Client/Case no <u>Hanford</u> <u>SDG-H0471</u> Case no <u>TRB-SBB-207925</u> Client sample id <u>Lab Control Sample</u> Material/Matrix <u>SOLID</u> SAF No <u>B99-004</u>
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ANALYTE	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST	ADDED pCi/g	2σ ERR pCi/g	REC %	3σ LMTS (TOTAL)	PROTOCOL LIMITS
Cobalt 60	0.843	0.068	0.025	0.050		GAM	0.859	0.034	98	74-126	80-120
Cesium 137	0.884	0.062	0.040	0.10		GAM	0.970	0.039	91	77-123	80-120

100 D Areas-Quick Turn

QC-LCS 31333

LAB CONTROL SAMPLES

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Lab id <u>TMANC</u>
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Version <u>3.06</u>
Report date <u>07/28/99</u>

TMA / RICHMOND
SAMPLE DELIVERY GROUP H0471

N907122-01

B0VYV0

D A T A S H E E T

SDG <u>7731</u>	Client/Case no <u>Hanford</u>	SDG-H0471
Contact <u>L.A. Johnson</u>	Case no <u>TRB-SBB-207925</u>	
Lab sample id <u>N907122-01</u>	Client sample id <u>B0VYV0</u>	
Dept sample id <u>7731-001</u>	Location/Matrix <u>100D</u>	<u>SOLID</u>
Received <u>07/22/99</u>	Collected <u>07/20/99 12:30</u>	
	Custody/SAF No <u>B99-004-100</u>	<u>B99-004</u>

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.070</u>	0.050	U	GAM
Cesium 137	10045-97-3	U		<u>0.075</u>	0.10	U	GAM
Europium 152	14683-23-9	U		<u>0.19</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.29</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.20</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.28		U	GAM

100 D Areas-Quick Turn

DATA SHEETS

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Lab id <u>TMANC</u>
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Report date <u>07/28/99</u>

TMA / RICHMOND
SAMPLE DELIVERY GROUP H0471

N907122-02

B0VYV1

DATA SHEET

SDG <u>7731</u>	Client/Case no <u>Hanford</u>	<u>SDG-H0471</u>
Contact <u>L.A. Johnson</u>	Case no <u>TRB-SBB-207925</u>	
Lab sample id <u>N907122-02</u>	Client sample id <u>B0VYV1</u>	
Dept sample id <u>7731-002</u>	Location/Matrix <u>100D</u>	<u>SOLID</u>
Received <u>07/22/99</u>	Collected <u>07/20/99 12:33</u>	
	Custody/SAF No <u>B99-004-100</u>	<u>B99-004</u>

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		0.040	0.050	U	GAM
Cesium 137	10045-97-3	U		0.041	0.10	U	GAM
Europium 152	14683-23-9	U		0.10	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.13</u>	0.10	U	GAM
Europium 155	14391-16-3	U		0.10	0.10	U	GAM
Americium 241	14596-10-2	U		0.12		U	GAM

100 D Areas-Quick Turn

TMA / RICHMOND
SAMPLE DELIVERY GROUP H0471

N907122-03

B0VYV2

DATA SHEET

SDG <u>7731</u>	Client/Case no <u>Hanford</u>	SDG-H0471
Contact <u>L.A. Johnson</u>	Case no <u>TRB-SBB-207925</u>	
Lab sample id <u>N907122-03</u>	Client sample id <u>B0VYV2</u>	
Dept sample id <u>7731-003</u>	Location/Matrix <u>100D</u>	<u>SOLID</u>
Received <u>07/22/99</u>	Collected <u>07/20/99 12:35</u>	
	Custody/SAF No <u>B99-004-100</u>	<u>B99-004</u>

ANALYTE	CAS NO	RESULT pCi/g	2σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.069</u>	0.050	U	GAM
Cesium 137	10045-97-3	U		<u>0.058</u>	0.10	U	GAM
Europium 152	14683-23-9	U		<u>0.12</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.23</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.11</u>	0.10	U	GAM
Americium 241	14596-10-2	U		<u>0.070</u>		U	GAM

100 D Areas-Quick Turn

Lab id <u>TMANC</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>07/28/99</u>

TMA / RICHMOND
SAMPLE DELIVERY GROUP H0471

N907122-04

B0VYV3

DATA SHEET

SDG <u>7731</u>	Client/Case no <u>Hanford</u>	SDG-H0471
Contact <u>L.A. Johnson</u>	Case no <u>TRB-SBB-207925</u>	
Lab sample id <u>N907122-04</u>	Client sample id <u>B0VYV3</u>	
Dept sample id <u>7731-004</u>	Location/Matrix <u>100D</u>	<u>SOLID</u>
Received <u>07/22/99</u>	Collected <u>07/20/99 12:38</u>	
	Custody/SAF No <u>B99-004-100</u>	<u>B99-004</u>

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.057</u>	0.050	U	GAM
Cesium 137	10045-97-3	U		<u>0.058</u>	0.10	U	GAM
Europium 152	14683-23-9	U		<u>0.14</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.20</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.15</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.22		U	GAM

100 D Areas-Quick Turn

Lab id <u>TMANC</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
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Report date <u>07/28/99</u>

TMA / RICHMOND
SAMPLE DELIVERY GROUP H0471

N907122-05

B0VYV4

DATA SHEET

SDG <u>7731</u>	Client/Case no <u>Hanford</u>	<u>SDG-H0471</u>
Contact <u>L.A. Johnson</u>	Case no <u>TRB-SBB-207925</u>	
Lab sample id <u>N907122-05</u>	Client sample id <u>B0VYV4</u>	
Dept sample id <u>7731-005</u>	Location/Matrix <u>100D</u>	<u>SOLID</u>
Received <u>07/22/99</u>	Collected <u>07/20/99 12:40</u>	
	Custody/SAF No <u>B99-004-100</u>	<u>B99-004</u>

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		0.036	0.050	U	GAM
Cesium 137	10045-97-3	0.027	0.026	0.033	0.10	U	GAM
Europium 152	14683-23-9	0.065	0.051	0.073	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.12</u>	0.10	U	GAM
Europium 155	14391-16-3	U		0.089	0.10	U	GAM
Americium 241	14596-10-2	U		0.11		U	GAM

100 D Areas-Quick Turn

Lab id <u>TMANC</u>
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TMA / RICHMOND
SAMPLE DELIVERY GROUP H0471

N907122-06

B0VYV5

D A T A S H E E T

SDG <u>7731</u>	Client/Case no <u>Hanford</u>	SDG-H0471
Contact <u>L.A. Johnson</u>	Case no <u>TRB-SBB-207925</u>	
Lab sample id <u>N907122-06</u>	Client sample id <u>B0VYV5</u>	
Dept sample id <u>7731-006</u>	Location/Matrix <u>100D</u>	<u>SOLID</u>
Received <u>07/22/99</u>	Collected <u>07/20/99 12:42</u>	
	Custody/SAF No <u>B99-004-100</u>	<u>B99-004</u>

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		0.042	0.050	U	GAM
Cesium 137	10045-97-3	U		0.041	0.10	U	GAM
Europium 152	14683-23-9	U		0.092	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.17</u>	0.10	U	GAM
Europium 155	14391-16-3	U		0.088	0.10	U	GAM
Americium 241	14596-10-2	U		0.054		U	GAM

100 D Areas-Quick Turn

Lab id <u>TMANC</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
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TMA / RICHMOND
SAMPLE DELIVERY GROUP H0471

N907122-07

B0VYV6

DATA SHEET

SDG <u>7731</u>	Client/Case no <u>Hanford</u>	<u>SDG-H0471</u>
Contact <u>L.A. Johnson</u>	Case no <u>TRB-SBB-207925</u>	
Lab sample id <u>N907122-07</u>	Client sample id <u>B0VYV6</u>	
Dept sample id <u>7731-007</u>	Location/Matrix <u>100D</u>	<u>SOLID</u>
Received <u>07/22/99</u>	Collected <u>07/20/99 12:45</u>	
	Custody/SAF No <u>B99-004-100</u>	<u>B99-004</u>

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		0.037	0.050	U	GAM
Cesium 137	10045-97-3	U		0.036	0.10	U	GAM
Europium 152	14683-23-9	U		0.097	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.13</u>	0.10	U	GAM
Europium 155	14391-16-3	U		0.10	0.10	U	GAM
Americium 241	14596-10-2	U		0.14		U	GAM

100 D Areas-Quick Turn

Lab id <u>TMANC</u>
Protocol <u>Hanford</u>
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TMA / RICHMOND
SAMPLE DELIVERY GROUP H0471

N907122-08

B0VYV7

DATA SHEET

SDG <u>7731</u>	Client/Case no <u>Hanford</u>	<u>SDG-H0471</u>
Contact <u>L.A. Johnson</u>	Case no <u>TRB-SBB-207925</u>	
Lab sample id <u>N907122-08</u>	Client sample id <u>B0VYV7</u>	
Dept sample id <u>7731-008</u>	Location/Matrix <u>100D</u>	<u>SOLID</u>
Received <u>07/22/99</u>	Collected <u>07/20/99 12:48</u>	
	Custody/SAF No <u>B99-004-100</u>	<u>B99-004</u>

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		0.024	0.050	U	GAM
Cesium 137	10045-97-3	0.092	0.027	0.027	0.10	J	GAM
Europium 152	14683-23-9	U		0.058	0.10	U	GAM
Europium 154	15585-10-1	U		0.072	0.10	U	GAM
Europium 155	14391-16-3	U		0.064	0.10	U	GAM
Americium 241	14596-10-2	U		0.074		U	GAM

100 D Areas-Quick Turn

TMA / RICHMOND
SAMPLE DELIVERY GROUP H0471

N907122-09

B0VYV8

DATA SHEET

SDG <u>7731</u>	Client/Case no <u>Hanford</u>	<u>SDG-H0471</u>
Contact <u>L.A. Johnson</u>	Case no <u>TRB-SBB-207925</u>	
Lab sample id <u>N907122-09</u>	Client sample id <u>B0VYV8</u>	
Dept sample id <u>7731-009</u>	Location/Matrix <u>100D</u>	<u>SOLID</u>
Received <u>07/22/99</u>	Collected <u>07/20/99 13:00</u>	
	Custody/SAF No <u>B99-004-100</u>	<u>B99-004</u>

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.061</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.063	0.052	0.056	0.10	J	GAM
Europium 152	14683-23-9	U		<u>0.11</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.21</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.11</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.071		U	GAM

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TMA / RICHMOND
SAMPLE DELIVERY GROUP H0471

N907122-10

B0VYV9

DATA SHEET

SDG <u>7731</u>	Client/Case no <u>Hanford</u>	SDG- <u>H0471</u>
Contact <u>L.A. Johnson</u>	Case no <u>TRB-SBB-207925</u>	
Lab sample id <u>N907122-10</u>	Client sample id <u>B0VYV9</u>	
Dept sample id <u>7731-010</u>	Location/Matrix <u>100D</u>	<u>SOLID</u>
Received <u>07/22/99</u>	Collected <u>07/20/99 13:03</u>	
	Custody/SAF No <u>B99-004-100</u>	<u>B99-004</u>

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		0.027	0.050	U	GAM
Cesium 137	10045-97-3	U		0.028	0.10	U	GAM
Europium 152	14683-23-9	U		0.072	0.10	U	GAM
Europium 154	15585-10-1	U		0.090	0.10	U	GAM
Europium 155	14391-16-3	U		0.073	0.10	U	GAM
Americium 241	14596-10-2	U		0.090		U	GAM

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TMA / RICHMOND
SAMPLE DELIVERY GROUP H0471

N907122-11

BOVYW0

DATA SHEET

SDG <u>7731</u>	Client/Case no <u>Hanford</u>	<u>SDG-H0471</u>
Contact <u>L.A. Johnson</u>	Case no <u>TRB-SBB-207925</u>	
Lab sample id <u>N907122-11</u>	Client sample id <u>BOVYW0</u>	
Dept sample id <u>7731-011</u>	Location/Matrix <u>100D</u>	<u>SOLID</u>
Received <u>07/22/99</u>	Collected <u>07/20/99 13:05</u>	
	Custody/SAF No <u>B99-004-101</u>	<u>B99-004</u>

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.075</u>	0.050	U	GAM
Cesium 137	10045-97-3	U		<u>0.070</u>	0.10	U	GAM
Europium 152	14683-23-9	U		<u>0.16</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.25</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.17</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.25		U	GAM

100 D Areas-Quick Turn

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TMA / RICHMOND
SAMPLE DELIVERY GROUP H0471

N907122-12

B0VYW1

DATA SHEET

SDG <u>7731</u>	Client/Case no <u>Hanford</u>	SDG-H0471
Contact <u>L.A. Johnson</u>	Case no <u>TRB-SBB-207925</u>	
Lab sample id <u>N907122-12</u>	Client sample id <u>B0VYW1</u>	
Dept sample id <u>7731-012</u>	Location/Matrix <u>100D</u>	<u>SOLID</u>
Received <u>07/22/99</u>	Collected <u>07/20/99 13:08</u>	
	Custody/SAF No <u>B99-004-101</u>	<u>B99-004</u>

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		0.046	0.050	U	GAM
Cesium 137	10045-97-3	U		0.045	0.10	U	GAM
Europium 152	14683-23-9	U		0.096	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.13</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.11</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.14		U	GAM

100 D Areas-Quick Turn

Lab id <u>TMANC</u>
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TMA / RICHMOND
SAMPLE DELIVERY GROUP H0471

N907122-13

B0VYW2

DATA SHEET

SDG <u>7731</u>	Client/Case no <u>Hanford</u>	<u>SDG-H0471</u>
Contact <u>L.A. Johnson</u>	Case no <u>TRB-SBB-207925</u>	
Lab sample id <u>N907122-13</u>	Client sample id <u>B0VYW2</u>	
Dept sample id <u>7731-013</u>	Location/Matrix <u>100D</u>	<u>SOLID</u>
Received <u>07/22/99</u>	Collected <u>07/20/99 13:10</u>	
	Custody/SAF No <u>B99-004-101</u>	<u>B99-004</u>

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.080</u>	0.050	U	GAM
Cesium 137	10045-97-3	U		<u>0.082</u>	0.10	U	GAM
Europium 152	14683-23-9	U		<u>0.16</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.24</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.18</u>	0.10	U	GAM
Americium 241	14596-10-2	U		<u>0.26</u>		U	GAM

100 D Areas-Quick Turn

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TMA / RICHMOND
SAMPLE DELIVERY GROUP H0471

N907122-14

BOVYW3

DATA SHEET

SDG <u>7731</u>	Client/Case no <u>Hanford</u>	SDG-H0471
Contact <u>L.A. Johnson</u>	Case no <u>TRB-SBB-207925</u>	
Lab sample id <u>N907122-14</u>	Client sample id <u>BOVYW3</u>	
Dept sample id <u>7731-014</u>	Location/Matrix <u>100D</u>	<u>SOLID</u>
Received <u>07/22/99</u>	Collected <u>07/20/99 13:20</u>	
	Custody/SAF No <u>B99-004-101</u>	<u>B99-004</u>

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		0.044	0.050	U	GAM
Cesium 137	10045-97-3	0.093	0.053	0.055	0.10	J	GAM
Europium 152	14683-23-9	U		<u>0.13</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.15</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.12</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.14		U	GAM

100 D Areas-Quick Turn

Lab id <u>TMANC</u>
Protocol <u>Hanford</u>
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TMA / RICHMOND
SAMPLE DELIVERY GROUP H0471

N907122-15

B0VYW4

DATA SHEET

SDG <u>7731</u>	Client/Case no <u>Hanford</u>	<u>SDG-H0471</u>
Contact <u>L.A. Johnson</u>	Case no <u>TRB-SBB-207925</u>	
Lab sample id <u>N907122-15</u>	Client sample id <u>B0VYW4</u>	
Dept sample id <u>7731-015</u>	Location/Matrix <u>100D</u>	<u>SOLID</u>
Received <u>07/22/99</u>	Collected <u>07/20/99 13:23</u>	
	Custody/SAF No <u>B99-004-101</u>	<u>B99-004</u>

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.064</u>	0.050	U	GAM
Cesium 137	10045-97-3	U		<u>0.059</u>	0.10	U	GAM
Europium 152	14683-23-9	U		<u>0.15</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.21</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.16</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.23		U	GAM

100 D Areas-Quick Turn

Lab id <u>TMANC</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
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TMA / RICHMOND
SAMPLE DELIVERY GROUP H0471

N907122-16

B0VYW5

DATA SHEET

SDG <u>7731</u>	Client/Case no <u>Hanford</u>	SDG-H0471
Contact <u>L.A. Johnson</u>	Case no <u>TRB-SBB-207925</u>	
Lab sample id <u>N907122-16</u>	Client sample id <u>B0VYW5</u>	
Dept sample id <u>7731-016</u>	Location/Matrix <u>100D</u>	<u>SOLID</u>
Received <u>07/22/99</u>	Collected <u>07/20/99 13:25</u>	
	Custody/SAF No <u>B99-004-101</u>	<u>B99-004</u>

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		0.035	0.050	U	GAM
Cesium 137	10045-97-3	U		0.030	0.10	U	GAM
Europium 152	14683-23-9	U		0.091	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.13</u>	0.10	U	GAM
Europium 155	14391-16-3	U		0.092	0.10	U	GAM
Americium 241	14596-10-2	U		0.11		U	GAM

100 D Areas-Quick Turn

Lab id <u>TMANC</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
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TMA / RICHMOND
SAMPLE DELIVERY GROUP H0471

N907122-17

B0VYW6

DATA SHEET

SDG <u>7731</u>	Client/Case no <u>Hanford</u>	SDG- <u>H0471</u>
Contact <u>L.A. Johnson</u>	Case no <u>TRB-SBB-207925</u>	
Lab sample id <u>N907122-17</u>	Client sample id <u>B0VYW6</u>	
Dept sample id <u>7731-017</u>	Location/Matrix <u>100D</u>	<u>SOLID</u>
Received <u>07/22/99</u>	Collected <u>07/20/99 13:28</u>	
	Custody/SAF No <u>B99-004-101</u>	<u>B99-004</u>

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.085</u>	0.050	U	GAM
Cesium 137	10045-97-3	0.101	0.064	0.067	0.10		GAM
Europium 152	14683-23-9	0.176	0.11	<u>0.15</u>	0.10		GAM
Europium 154	15585-10-1	U		<u>0.25</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.20</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.29		U	GAM

100 D Areas-Quick Turn

Lab id <u>TMANC</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
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TMA / RICHMOND
SAMPLE DELIVERY GROUP H0471

N907122-18

B0VYW7

DATA SHEET

SDG <u>7731</u>	Client/Case no <u>Hanford</u>	SDG- <u>H0471</u>
Contact <u>L.A. Johnson</u>	Case no <u>TRB-SBB-207925</u>	
Lab sample id <u>N907122-18</u>	Client sample id <u>B0VYW7</u>	
Dept sample id <u>7731-018</u>	Location/Matrix <u>100D</u>	<u>SOLID</u>
Received <u>07/22/99</u>	Collected <u>07/20/99 13:30</u>	
	Custody/SAF No <u>B99-004-101</u>	<u>B99-004</u>

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		0.041	0.050	U	GAM
Cesium 137	10045-97-3	U		0.042	0.10	U	GAM
Europium 152	14683-23-9	U		0.097	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.14</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.11</u>	0.10	U	GAM
Americium 241	14596-10-2	U		0.13		U	GAM

100 D Areas-Quick Turn

Lab id <u>TMANC</u>
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TMA / RICHMOND
SAMPLE DELIVERY GROUP H0471

N907122-19

B0VYW8

DATA SHEET

SDG <u>7731</u>	Client/Case no <u>Hanford</u>	<u>SDG-H0471</u>
Contact <u>L.A. Johnson</u>	Case no <u>TRB-SBB-207925</u>	
Lab sample id <u>N907122-19</u>	Client sample id <u>B0VYW8</u>	
Dept sample id <u>7731-019</u>	Location/Matrix <u>100D</u>	<u>SOLID</u>
Received <u>07/22/99</u>	Collected <u>07/20/99 13:45</u>	
	Custody/SAF No <u>B99-004-101</u>	<u>B99-004</u>

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.075</u>	0.050	U	GAM
Cesium 137	10045-97-3	U		<u>0.062</u>	0.10	U	GAM
Europium 152	14683-23-9	U		<u>0.14</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.26</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.13</u>	0.10	U	GAM
Americium 241	14596-10-2	U		<u>0.078</u>		U	GAM

100 D Areas-Quick Turn

Lab id <u>TMANC</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>07/28/99</u>

TMA / RICHMOND
SAMPLE DELIVERY GROUP H0471

N907122-20

B0VYW9

DATA SHEET

SDG <u>7731</u>	Client/Case no <u>Hanford</u>	<u>SDG-H0471</u>
Contact <u>L.A. Johnson</u>	Case no <u>TRB-SBB-207925</u>	
Lab sample id <u>N907122-20</u>	Client sample id <u>B0VYW9</u>	
Dept sample id <u>7731-020</u>	Location/Matrix <u>100D</u>	<u>SOLID</u>
Received <u>07/22/99</u>	Collected <u>07/20/99 13:55</u>	
	Custody/SAF No <u>B99-004-101</u>	<u>B99-004</u>

ANALYTE	CAS NO	RESULT pCi/g	2 σ ERR (COUNT)	MDA pCi/g	RDL pCi/g	QUALI- FIERS	TEST
Cobalt 60	10198-40-0	U		<u>0.073</u>	0.050	U	GAM
Cesium 137	10045-97-3	U		<u>0.064</u>	0.10	U	GAM
Europium 152	14683-23-9	U		<u>0.16</u>	0.10	U	GAM
Europium 154	15585-10-1	U		<u>0.22</u>	0.10	U	GAM
Europium 155	14391-16-3	U		<u>0.16</u>	0.10	U	GAM
Americium 241	14596-10-2	U		<u>0.24</u>		U	GAM

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TMA/RICHMOND

SAMPLE DELIVERY GROUP H0471

METHOD SUMMARY

GAMMA SCAN

GAMMA SPECTROSCOPY

Test GAM Matrix SOLIDSDG 7731Contact L.A. JohnsonClient HanfordContract TRB-SBB-207925Case no SDG-H0471

RESULTS

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW SUP- TEST FIX	PLANCHET	Cobalt 60	Cesium 137
Preparation batch 2851-114					
B0VYV0	N907122-01		7731-001	U	U
B0VYV1	N907122-02		7731-002	U	U
B0VYV2	N907122-03		7731-003	U	U
B0VYV3	N907122-04		7731-004	U	U
B0VYV4	N907122-05		7731-005	U	U
B0VYV5	N907122-06		7731-006	U	U
B0VYV6	N907122-07		7731-007	U	U
B0VYV7	N907122-08		7731-008	U	0.092 J
B0VYV8	N907122-09		7731-009	U	0.063 J
B0VYV9	N907122-10		7731-010	U	U
B0VYW0	N907122-11		7731-011	U	U
B0VYW1	N907122-12		7731-012	U	U
B0VYW2	N907122-13		7731-013	U	U
B0VYW3	N907122-14		7731-014	U	0.093 J
B0VYW4	N907122-15		7731-015	U	U
B0VYW5	N907122-16		7731-016	U	U
B0VYW6	N907122-17		7731-017	U	0.101
B0VYW7	N907122-18		7731-018	U	U
B0VYW8	N907122-19		7731-019	U	U
B0VYW9	N907122-20		7731-020	U	U
BLK (QC ID=31334)	N907122-22		7731-022	U	U
LCS (QC ID=31333)	N907122-21		7731-021	ok	ok

Nominal values and limits from method	RDLs (pCi/g)	0.050	0.10
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METHOD SUMMARIES

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TMA/RICHMOND
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METHOD SUMMARY

GAMMA SCAN
GAMMA SPECTROSCOPY

Test GAM Matrix SOLID
SDG 7731
Contact L.A. Johnson

Client Hanford
Contract TRB-SBB-207925
Case no SDG-H0471

METHOD PERFORMANCE

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST FIX	SUF- pCi/g	MAX MDA g	ALIQ g	PREP FAC	DILU- TION	YIELD %	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HBLD	ANAL- PREPARED	YZED	DETECTOR
Preparation batch 2851-114 2σ prep error 15.0 % Reference Lab Notebook #2851 pg. 114																
B0VYV0	N907122-01		0.070	947						33			6	07/22/99	07/26	02,03,00
B0VYV1	N907122-02		0.040	974						34			6	07/22/99	07/26	02,04,00
B0VYV2	N907122-03		0.069	967						49			6	07/22/99	07/26	02,01,00
B0VYV3	N907122-04		0.057	1030						49			6	07/22/99	07/26	02,03,00
B0VYV4	N907122-05		0.036	975						49			6	07/22/99	07/26	02,04,00
B0VYV5	N907122-06		0.042	974						98			6	07/22/99	07/26	02,01,00
B0VYV6	N907122-07		0.037	1060						98			6	07/22/99	07/26	02,03,00
B0VYV7	N907122-08		0.024	995						98			6	07/22/99	07/26	02,04,00
B0VYV8	N907122-09		0.061	921						66			6	07/22/99	07/26	02,01,00
B0VYV9	N907122-10		0.027	1070						66			6	07/22/99	07/26	02,04,00
B0VYW0	N907122-11		0.075	1110						31			7	07/22/99	07/27	02,03,00
B0VYW1	N907122-12		0.046	1020						30			7	07/22/99	07/27	02,04,00
B0VYW2	N907122-13		0.080	1060						33			7	07/22/99	07/27	02,03,00
B0VYW3	N907122-14		0.044	904						33			7	07/22/99	07/27	02,04,00
B0VYW4	N907122-15		0.064	966						38			7	07/22/99	07/27	02,03,00
B0VYW5	N907122-16		0.035	1030						38			7	07/22/99	07/27	02,04,00
B0VYW6	N907122-17		0.085	1010						31			7	07/22/99	07/27	02,03,00
B0VYW7	N907122-18		0.041	1040						31			7	07/22/99	07/27	02,04,00
B0VYW8	N907122-19		0.075	1030						40			7	07/22/99	07/27	02,01,00
B0VYW9	N907122-20		0.073	1020						39			7	07/22/99	07/27	02,03,00
BLK (QC ID=31334)	N907122-22		0.038	1000						33				07/22/99	07/27	01,01,00
LCS (QC ID=31333)	N907122-21		0.025	1000						39				07/22/99	07/27	01,04,00

Nominal values and limits from method 0.050 1000 100 180

PROCEDURES REFERENCE GAMMAHI
EP-060 Soil Preparation, rev 0
EP-100 Ge(Li) Preparation for Environmental Samples,
rev 0

AVERAGES ± 2 SD MDA 0.052 ± 0.039
FOR 22 SAMPLES YIELD ±

METHOD SUMMARIES

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REPORT GUIDE

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SAMPLE SUMMARY

The Sample and QC Summary Reports show all samples, including QC samples, reported in one Sample Delivery Group (SDG).

The Sample Summary Report fully identifies client samples and gives the corresponding lab sample identification. The QC Summary Report shows at the sample level how the lab organized the samples into batches and generated QC samples. The Preparation Batch and Method Summary Reports show this at the analysis level.

The following notes apply to these reports:

- * LAB SAMPLE ID is the lab's primary identification for a sample.
- * DEPARTMENT SAMPLE ID is an alternate lab id, for example one assigned by a radiochemistry department in a lab.
- * CLIENT SAMPLE ID is the client's primary identification for a sample. It includes any sample preparation done by the client that is necessary to identify the sample.
- * QC BATCH is a lab assigned code that groups samples to be processed and QCed together. These samples should have similar matrices.

QC BATCH is not necessarily the same as SDG, which reflects samples received and reported together.

- * All Lab Control Samples, Method Blanks, Duplicates and Matrix Spikes are shown that QC any of the samples. Due to possible reanalyses, not all results for all these QC samples may be relevant to the SDG. The Lab Control Sample, Method Blank, Duplicate, Matrix Spike and Method Summary Reports detail these relationships.

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PREPARATION BATCH SUMMARY

The Preparation Batch Summary Report shows all preparation batches in one Sample Delivery Group (SDG) with information necessary to check the completeness and consistency of the SDG.

The following notes apply to this report:

- * The preparation batches are shown in the same order as the Method Summary Reports are printed.
- * Only analyses of planchets relevant to the SDG are included.
- * Each preparation batch should have at least one Method Blank and LCS in it to validate client sample results.
- * The QUALIFIERS shown are all qualifiers other than U, J, B, L and H that occur on any analysis in the preparation batch. The Method Summary Report has these qualifiers on a per sample basis.

These qualifiers should be reviewed as follows:

- X Some data has been manually entered or modified.
Transcription errors are possible.
- P One or more results are 'preliminary'. The data is not ready for final reporting.
- 2 There were two or more results for one analyte on one planchet imported at one time. The results in DVD may not be the same as on the raw data sheets.

Other lab defined qualifiers may occur. In general, these should be addressed in the SDG narrative.

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WORK SUMMARY

The Work Summary Report shows all samples, including QC samples, and all relevant analyses in one Sample Delivery Group (SDG). This report is often useful as supporting documentation for an invoice.

The following notes apply to this report:

- * TEST is a code for the method used to measure associated analytes. Results and related information for each analyte are on the Data Sheet Report. In special cases, a test code used in the summary data section is not the same as in associated raw data. In this case, both codes are shown on the Work Summary.
- * SUFFIX is the lab's code to distinguish multiple analyses (recounts, reworks, reanalyses) of a fraction of the sample. The suffix indicates which result is being reported. An empty suffix normally identifies the first attempt to analyze the sample.
- * The LAB SAMPLE ID, TEST and SUFFIX uniquely identify all supporting data for a result. The Method Summary Report for each TEST has method performance data, such as yield, for each lab sample id and suffix and procedures used in the method.
- * PLANCHET is an alternate lab identifier for work done for one test. It, combined with the TEST and SUFFIX, may be the best link to raw data.
- * For QC samples, only analyses that directly QC some regular sample are shown. The Lab Control Sample, Method Blank, Duplicate, Matrix Spike and Method Summary Reports detail these relationships.
- * The SAS (Special Analytical Services) Number is a client or lab assigned code that reflects special processing for samples, such as rapid turn around. Counts of tests done are lists by SAS number since it is likely to affect prices.

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DATA SHEET

The Data Sheet Report shows all results and primary supporting information for one client sample or Method Blank. This report corresponds to both the CLP Inorganics and Organics Data Sheet.

The following notes apply to this report:

- * TEST is a code for the method used to measure an analyte. If the TEST is empty, no data is available; the analyte was not analyzed for.
- * The LAB SAMPLE ID and TEST uniquely identify work within the Summary Data Section of a Data Package. The Work Summary and Method Summary Reports further identify raw data that underlies this work.

The Method Summary Report for each TEST has method performance data, such as yield, for each Lab Sample ID and a list of procedures used in the method.

- * ERRORS can be labeled TOTAL or COUNT. TOTAL implies a preparation (non-counting method) error has been added, as square root of sum of squares, to the counting error denoted by COUNT. The preparation errors, which may vary by preparation batch, are shown on the Method Summary Report.
- * A RESULT can be 'N.R.' (Not Reported). This means the lab did this work but chooses not to report it now, possibly because it was reported at another time.
- * When reporting a Method Blank, a RESULT can be 'N.A.' (Not Applicable). This means there is no reported client sample work in the same preparation batch as the Blank's result. This is likely to occur when the Method Blank is associated with reanalyses of selected work for a few samples in the SDG.

The following qualifiers are defined by the DVD system:

U The RESULT is less than the MDA (Minimum Detectable Activity).

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If the MDA is blank, the ERROR is used as the limit.

- J The RESULT is less than the RDL (Required Detection Limit) and no U qualifier is assigned.
- B A Method Blank associated with this sample had a result without a U flag and, after correcting for possibly different aliquots, that result is greater than or equal to the MDA for this sample.
- Normally, B is not assigned if U is. When method blank subtraction is shown on this report, B flags are assigned based on the unsubtracted values while U's are assigned based on the subtracted ones. Both flags can be assigned in this case.
- For each sample result, all Method Blank results in the same preparation batch are compared. The Method Summary Report documents this and other QC relationships.
- L Some Lab Control Sample that QC's this sample had a low recovery. The lab can disable assignment of this qualifier.
- H Similar to 'L' except the recovery was high.
- P The RESULT is 'preliminary'.
- X Some data necessary to compute the RESULT, ERROR or MDA was manually entered or modified.
- 2 There were two or more results available for this analyte. The reported result may not be the same as in the raw data.

Other qualifiers are lab defined. Definitions should be in the SDG narrative.

The following values are underlined to indicate possible problems:

- * An MDA is underlined if it is bigger than its RDL.

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- * An ERROR is underlined if the 1.645 sigma counting error is bigger than both the MDA and the RESULT, implying that the MDA may not be a good estimate of the 'real' minimum detectable activity.
- * A negative RESULT is underlined if it is less than the negative of its 2 sigma counting ERROR.
- * When reporting a Method Blank, a RESULT is underlined if greater than its MDA. If the MDA is blank, the 2 sigma counting error is used in the comparison.

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LAB CONTROL SAMPLE

The Lab Control Sample Report shows all results, recoveries and primary supporting information for one Lab Control Sample.

The following notes apply to this report:

- * All fields in common with the Data Sheet Report have similar usage. Refer to its Report Guide for details.
- * An amount ADDED is the lab's value for the actual amount spiked into this sample with its ERROR an estimate of the error of this amount.

An amount added is underlined if its ratio to the corresponding RDL is outside protocol specified limits.

- * REC (Recovery) is RESULT divided by ADDED expressed as a percent.
- * The first, computed limits for the recovery reflect:
 1. The error of RESULT, including that introduced by rounding the result prior to printing.

If the limits are labeled (TOTAL), they include preparation error in the result. If labeled (COUNT), they do not.
 2. The error of ADDED.
 3. A lab specified, per analyte bias. The bias changes the center of the computed limits.
- * The second limits are protocol defined upper and lower QC limits for the recovery.
- * The recovery is underlined if it is outside either of these ranges.

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DUPLICATE

The Duplicate Report shows all results, differences and primary supporting information for one Duplicate and associated Original sample.

The following notes apply to this report:

- * All fields in common with the Data Sheet Report have similar usage. This applies both to the Duplicate and Original sample data. Refer to the Data Sheet Report Guide for details.

If the Duplicate has data for a TEST and the lab did not do this test to the Original, the Original's RESULTS are underlined.

- * The RPD (Relative Percent Difference) is the absolute value of the difference of the RESULTS divided by their average expressed as a percent.

If both RESULTS are less than their MDAs, no RPD is computed and a '-' is printed.

For an analyte, if the lab did work for both samples but has data for only one, the MDA from the sample with data is used as the other's result in the RPD.

- * The first, computed limit is the sum, as square root of sum of squares, of the errors of the results divided by the average result as a percent, hence the relative error of the difference rather than the error of the relative difference. The errors include those introduced by rounding the RESULTS prior to printing.

If this limit is labeled TOT, it includes the preparation error in the RESULTS. If labeled CNT, it does not.

This value reported for this limit is at most 999.

- * The second limit for the RPD is the larger of:
 1. A fixed percentage specified in the protocol.

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DUPLICATE

2. A protocol factor (typically 2) times the average MDA as a percent of the average result. This limit applies when the results are close to the MDAs.

- * The RPD is underlined if it is greater than either limit.
- * If specified by the lab, the second limit column is replaced by the Difference Error Ratio (DER), which is the absolute value of the difference of the results divided by the quadratic sum of their one sigma errors, the same errors as used in the first limit.

Except for differences due to rounding, the DER is the same as the RPD divided by the first RPD limit with the limit scaled to 1 sigma.

- * The DER is underlined if it is greater than the sigma factor, typically 2 or 3, shown in the header for the first RPD limit.

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MATRIX SPIKE

The Matrix Spike Report shows all results, recoveries and primary supporting information for one Matrix Spike and associated Original sample.

The following notes apply to this report:

- * All fields in common with the Data Sheet Report have similar usage. This applies both to the Spiked and Original sample data. Refer to the Data Sheet Report Guide for details.

If the Spike has data for a TEST and the lab did not do this test to the Original, the Original's RESULTS are underlined.

- * An amount ADDED is the lab's value for the actual amount spiked into the Spike sample with its ERROR an estimate of the error of this amount.

An amount is underlined if its ratio to the corresponding RDL is outside protocol specified limits.

- * REC (Recovery) is the Spike RESULT minus the Original RESULT divided by ADDED expressed as a percent.
- * The first, computed limits for the recovery reflect:
 1. The errors of the two RESULTS, including those introduced by rounding them prior to printing.

If the limits are labeled (TOTAL), they include preparation error in the result. If labeled (COUNT), they do not.
 2. The error of ADDED.
 3. A lab specified, per analyte bias. The bias changes the center of the computed limits.
- * The second limits are protocol defined upper and lower QC limits

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MATRIX SPIKE

for the recovery.

These limits are left blank if the Original RESULT is more than a protocol defined factor (typically 4) times ADDED. This is a way of accounting for that when the spike is small compared to the amount in the original sample, the recovery is unreliable.

- * The recovery is underlined (out of spec) if it is outside either of these ranges.

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METHOD SUMMARY

The Method Summary Report has two tables. One shows up to five results measured using one method. The other has performance data for the method. There is one report for each TEST, as used on the Data Sheet Report.

The following notes apply to this report:

- * Each table is subdivided into sections, one for each preparation batch. A preparation batch is a group of aliquots prepared at roughly the same time in one work area of the lab using the same method.

There should be Lab Control Sample and Method Blank results in each preparation batch since this close correspondence makes the QC meaningful. Depending on lab policy, Duplicates need not occur in each batch since they QC sample dependencies such as matrix effects.

- * The RAW TEST column shows the test code used in the raw data to identify a particular analysis if it is different than the test code in the header of the report. This occurs in special cases due to method specific details about how the lab labels work.

The Lab Sample or Planchet ID combined with the (Raw) Test Code and Suffix uniquely identify the raw data for each analysis.

- * If a result is less than both its MDA and RDL, it is replaced by just 'U' on this report. If it is greater than or equal to the RDL but less than the MDA, the result is shown with a 'U' flag.

The J and X flags are as on the data sheet.

- * Non-U results for Method Blanks are underlined to indicate possible contamination of other samples in the preparation batch. The Method Blank Report has supporting data.
- * Lab Control Sample and Matrix Spike results are shown as: ok, No data, LOW or HIGH, with the last two underlined. 'No data'

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means no amount ADDED was specified. 'LOW' and 'HIGH' correspond to when the recovery is underlined on the Lab Control Sample or Matrix Spike Report. See these reports for supporting data.

- * Duplicate sample results are shown as: ok, No data, or OUT, with the last two underlined. 'No data' means there was no original sample data found for this duplicate. 'OUT' corresponds to when the RPD is underlined on the Duplicate Report. See this report for supporting data.
- * If the MDA column is labeled 'MAX MDA', there was more than one result measured by the reported method and the MDA shown is the largest MDA. If not all these results have the same RDL, the MAX MDA reflects only those results with RDL equal to the smallest one.

MDAs are underlined if greater than the printed RDL.

- * Aliquots are underlined if less than the nominal value specified for the method.
- * Preparation factors are underlined if greater than the nominal value specified for the method.
- * Dilution factors are underlined if greater than the nominal value specified for the method.
- * Residues are underlined if outside the range specified for the method. Residues are not printed if yields are.
- * Yields, which may be gravimetric, radiometric or some type of recovery depending on the method, are underlined if outside the range specified for the method.
- * Efficiencies are underlined if outside the range specified for the method. Efficiencies are detector and geometry dependent so this test is only approximate.

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METHOD SUMMARY

- * Count times are underlined if less than the nominal value specified for the method.
- * Resolutions (as FWHM; Full Width at Half Max) are underlined if greater than the method specified limit.
- * Tracer drifts are underlined if their absolute values are greater than the method specified limit. Tracer drifts are not printed if percent moistures are.
- * Days Held are underlined if greater than the holding time specified in the protocol.
- * Analysis dates are underlined if before their planchet's preparation date or, if a limit is specified, too far after it.

For some methods, ratios as percentages and error estimates for them are computed for pairs of results. A ratio column header like '1+3' means the ratio of the first result column and the third result column.

Ratios are not computed for Lab Control Sample, Method Blank or Matrix Spike results since their matrices are not necessarily similar to client samples'.

The error estimate for a ratio of results from one planchet reflects only counting errors since other errors should be correlated. For a ratio involving different planchets, if QC limits are computed based on total errors, the error for the ratio allows for the preparation errors for the planchets.

The ratio is underlined (out of spec) if the absolute value of its difference from the nominal value is greater than its error estimate. If no nominal value is specified; this test is not done.

For Gross Alpha or Gross Beta results, there may be a column showing the sum of other Alpha or Beta emitters. This sum includes all relevant

REPORT GUIDES

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SUMMARY DATA SECTION

Page 46

Lab id TMANC
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 07/28/99

TMA / RICHMOND
SAMPLE DELIVERY GROUP H0471

SDG 7731
Contact L.A. Johnson

GUIDE, cont.

Client Hanford
Contract TRB-SBB-207925
Case no SDG-H0471

METHOD SUMMARY

results in the DVD database, whether reported or not. Results in the sum are weighted by a particles/decay value specified by the lab for each relevant analyte. Results less than their MDA are not included. No sums are computed for Lab Control, Method Blank or Matrix Spike samples since their various planchets may not be physically related.

If a ratio of total isotopic to Gross Alpha or Beta is shown, the error for the ratio reflects both the error in the Gross result and the sum, as square root of sum of squares, of the errors in the isotopic results.

For total elemental uranium or thorium results, there may be a column showing the total weight computed from associated isotopic results. Ignoring results less than their MDAs, this is a weighted sum of the isotopic results. The weights depend on the molecular weight and half-life of each isotope so as to convert activities (decays) to weight (atoms).

If a ratio of total computed to measured elemental uranium or thorium is shown, the error for the ratio reflects the errors in all the measurements.

REPORT GUIDES

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SUMMARY DATA SECTION

Page 47

Lab id TMANC
Protocol Hanford
Version Ver 1.0
Form DVD-RG
Version 3.06
Report date 07/28/99

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST					B99-004-100		Page 1 of 2 <i>AKT/AR</i>		
Collector R. Kerkow / B. Behnke		Company Contact R. Kerkow		Telephone No.		Project Coordinator TRENT, SJ		Price Code		Data Turnaround	
Project Designation 100 D Areas - Quick Turn		Sampling Location 100D		SAF No. B99-004						<i>7 day</i>	
Ice Chest No. <i>ERC 96-050</i>		Field Logbook No. EL-1339-5		Method of Shipment <i>Fed Ex.</i>							
Shipped To TMA/RECRA		Offsite Property No. <i>A990191</i>		Bill of Lading/Air Bill No. <i>423579527731</i>							
				COA <i>R100DC 2F00</i>							

POSSIBLE SAMPLE HAZARDS/REMARKS potentially radioactive Special Handling and/or Storage	Preservation	None	None								
	Type of Container	Marrinelli	P								
	No. of Container(s)	1	1								
	Volume	500mL	750mL								

SAMPLE ANALYSIS				See item (1) in Special Instructions.	See item (2) in Special Instructions.							
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Sample No.	Matrix *	Sample Date	Sample Time								
<i>✓✓</i> B0VYV0	Soil	<i>7-20-99</i>	<i>1230</i>	<i>X</i>							
<i>✓✓</i> B0VYV1	Soil	<i>7-20-99</i>	<i>1233</i>	<i>X</i>							
<i>✓✓</i> B0VYV2	Soil	<i>7-20-99</i>	<i>1235</i>	<i>X</i>							
<i>✓✓</i> B0VYV3	Soil	<i>7-20-99</i>	<i>1238</i>	<i>X</i>							
<i>✓✓</i> B0VYV4	Soil	<i>7-20-99</i>	<i>1240</i>	<i>X</i>							

CHAIN OF POSSESSION		Sign/Print Names		SPECIAL INSTRUCTIONS			Matrix *
Relinquished By <i>R. Kerkow</i>	Date/Time <i>7/20/99 1630</i>	Received By <i>R. Kerkow</i>	Date/Time <i>7/20/99 1630</i>	(1) Gamma Spectroscopy - Screen {Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} (2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155}; Gamma Spec - Add-on {Americium-241, Uranium-238}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium; Americium-241; Nickel-63; Strontium-8			Soil Water Vapor Other Solid Other Liquid
Relinquished By <i>R. Kerkow</i>	Date/Time <i>7/20/99 0755</i>	Received By <i>R. Nielsen</i>	Date/Time <i>7-21-99 0755</i>				
Relinquished By <i>R. Nielsen</i>	Date/Time <i>7-21-99 1300</i>	Received By <i>Fed Ex</i>	Date/Time <i>7/21/99</i>				
Relinquished By <i>Fed Ex</i>	Date/Time <i>7:40 7/22/99</i>	Received By <i>TNU M. Goldenberg</i>	Date/Time <i>7/22/99</i>				

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST					B99-004-100		Page 2 of 3 rev 7/19/99		
Collector R. Kerkow / B. Behnke		Company Contact R. Kerkow		Telephone No.		Project Coordinator TRENT, SJ		Price Code		Data Turnaround 7 day	
Project Designation 100 D Areas - Quick Turn		Sampling Location 100D		SAF No. B99-004							
Ice Chest No. ERC 96-050		Field Logbook No. EL-1339-5		Method of Shipment Fed Ex							
Shipped To TMA/RECRA		Offsite Property No. A990191		Bill of Lading/Air Bill No. 423579527731							
				COA R100DC 2FOO							

POSSIBLE SAMPLE HAZARDS/REMARKS potentially radioactive Special Handling and/or Storage	Preservation	None	None								
	Type of Container	Marrinelli	P								
	No. of Container(s)	1	1								
	Volume	500mL	750mL								

SAMPLE ANALYSIS				See item (1) in Special Instructions.	See item (2) in Special Instructions.							
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Sample No.	Matrix *	Sample Date	Sample Time								
B0VYV5	Soil	7-20-99	1242	X							
B0VYV6	Soil	7-20-99	1245	X							
B0VYV7	Soil	7-20-99	1248	X							
B0VYV8	Soil	7-20-99	1300	X							
B0VYV9	Soil	7-20-99	1303	X							

CHAIN OF POSSESSION		Sign/Print Names		SPECIAL INSTRUCTIONS			Matrix *			
Relinquished By RB Kerkow	Date/Time 7/20/99 1630	Received By Ref 1c	Date/Time 7/20/99 1630	(1) Gamma Spectroscopy - Screen {Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} (2) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155}; Gamma Spec - Add-on {Americium-241, Uranium-238}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Isotopic Plutonium; Americium-241; Nickel-63; Strontium-8			Soil Water Vapor Other Solid Other Liquid			
Relinquished By Ref #1c	Date/Time 7/20/99 0755	Received By R. Nielsen	Date/Time 7/21/99 0755							
Relinquished By R. Nielsen	Date/Time 7-21-99 1300	Received By Fed Ex	Date/Time 7/21/99 9:40							
Relinquished By Fed Ex	Date/Time 7/22/99 7:40	Received By TNU M. Goldenberg	Date/Time 7/22/99 9:40							
LABORATORY SECTION	Received By		Title					Date/Time		
FINAL SAMPLE DISPOSITION	Disposal Method		Disposed By					Date/Time		

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST					B99-004-101		Page 1 of 2 <i>PK 7/19/99</i>		
Collector R. Kerkow / B. Behnke		Company Contact R. Kerkow		Telephone No.		Project Coordinator TRENT, SJ		Price Code		Data Turnaround - <i>7 days</i>	
Project Designation 100 D Areas - Quick Turn		Sampling Location 100D		SAF No. B99-004							
Ice Chest No. <i>ERC96-050</i>		Field Logbook No. EL-1339-5		Method of Shipment <i>FedEx</i>							
Shipped To TMA/RECRA		Offsite Property No. <i>A990191</i>		Bill of Lading/Air Bill No. <i>42357952 7731</i>							
				COA <i>R100 DC 2F00</i>							

POSSIBLE SAMPLE HAZARDS/REMARKS potentially radioactive Special Handling and/or Storage	Preservation	None															
	Type of Container	Marrinelli															
	No. of Container(s)	1															
	Volume	500mL															
SAMPLE ANALYSIS			See item (1) in Special Instructions.														

Sample No.	Matrix *	Sample Date	Sample Time														
B0VYW0	Soil	7-20-99	1305	X													
B0VYW1	Soil	7-20-99	1308	X													
B0VYW2	Soil	7-20-99	1310	X													
B0VYW3	Soil	7-20-99	1320	X													
B0VYW4	Soil	7-20-99	1323	X													

CHAIN OF POSSESSION	Sign/Print Names	SPECIAL INSTRUCTIONS	Matrix *
Relinquished By <i>RB Kerkow</i>	Date/Time <i>7/20/99 1630</i>	Received By <i>Ry 12</i>	(1) Gamma Spectroscopy - Screen {Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} Soil Water Vapor Other Solid Other Liquid
Relinquished By <i>R. Nelson</i>	Date/Time <i>7/21/99 0755</i>	Received By <i>R. Nelson</i>	
Relinquished By <i>FedEx</i>	Date/Time <i>7/21/99 0755</i>	Received By <i>FedEx</i>	
Relinquished By <i>TNU M. Goldenberg</i>	Date/Time <i>7/22/99 9:40</i>	Received By <i>TNU M. Goldenberg</i>	

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST					B99-004-101		Page 2 of 2 PK 7/19/99		
Collector R. Kerkow / B. Behnke		Company Contact R. Kerkow		Telephone No.		Project Coordinator TRENT, SJ		Price Code		Data Turnaround 7 days	
Project Designation 100 D Areas - Quick Turn		Sampling Location 100D		SAF No. B99-004							
Ice Chest No. ERC 96-050		Field Logbook No. EL-1339-5		Method of Shipment Fed Ex							
Shipped To TMA/RECRA		Offsite Property No. A99091		Bill of Lading/Air Bill No. 423579527731							
				COA R100DC 2FO2							
POSSIBLE SAMPLE HAZARDS/REMARKS potentially radioactive				Preservation		None					
				Type of Container		Marrinelli					
				No. of Container(s)		1					
				Volume		500mL					
Special Handling and/or Storage											
SAMPLE ANALYSIS				See item (1) in Special Instructions.							
Sample No.		Matrix *		Sample Date		Sample Time					
B0VYW5		Soil		7-20-99		1325		X			
B0VYW6		Soil		7-20-99		1328		X			
B0VYW7		Soil		7-20-99		1330		X			
B0VYW8		Soil		7-20-99		1345		X			
B0VYW9		Soil		7-20-99		1355		X			
CHAIN OF POSSESSION		Sign/Print Names				SPECIAL INSTRUCTIONS (1) Gamma Spectroscopy - Screen (Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155)				Matrix * Soil Water Vapor Other Solid Other Liquid	
Relinquished By RB Kerkow		Date/Time 7/20/99		Received By Ry Ic		Date/Time 7/20/99					
Relinquished By REF #1C		Date/Time 7/21/99		Received By R Nielson		Date/Time 7/21/99					
Relinquished By R Nielson		Date/Time 7-21-99		Received By Fed Ex		Date/Time 7/21/99					
Relinquished By Fed Ex		Date/Time 7/22/99		Received By TNU M. Goldenberg		Date/Time 7/22/99					
LABORATORY SECTION		Received By		Title		Date/Time					
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By				Date/Time			

SAMPLE RECEIPT CHECKLIST

SAMPLE RECEIPT			
Client:	<u>Beechtel Hanford Inc</u>		Date/Time received <u>7-22-99 9:40</u>
CoC No.	<u>B99-004-100 (2p), B99-004-101 (2p)</u>		
Container I.D. No.	Requested TAT (Days) <u>7</u>	P.O. Received Yes [] No []	
INSPECTION			
1.	Custody seals on shipping container intact?	Yes [<input checked="" type="checkbox"/>]	No [] N/A []
2.	Custody seals on shipping container dated & signed?	Yes [<input checked="" type="checkbox"/>]	No [] N/A []
3.	Custody seals on sample containers intact?	Yes [<input checked="" type="checkbox"/>]	No [] N/A []
4.	Custody seals on sample containers dated & signed?	Yes [<input checked="" type="checkbox"/>]	No [] N/A []
5.	Cooler Temperature: _____	Packing material is:	Wet [] Dry [<input checked="" type="checkbox"/>]
6.	Number of samples in shipping container: <u>20</u>		
7.	Number of containers per sample: <u>1</u> (Or see CoC _____)		
8.	Paperwork agrees with samples?	Yes [<input checked="" type="checkbox"/>]	No []
9.	Samples have: Tape [<input checked="" type="checkbox"/>] Hazard labels [] Rad labels [<input checked="" type="checkbox"/>] Appropriate sample labels [<input checked="" type="checkbox"/>]		
10.	Samples are: In good condition [<input checked="" type="checkbox"/>] Leaking [] Broken Container [] Missing []		
11.	Describe any anomalies: _____ _____ _____ _____		
13.	Was P.M. notified of any anomalies?	Yes [<input checked="" type="checkbox"/>]	No [] Date <u>7-22-99</u>
14.	Received by <u>H. Goldenberg</u>	Date: <u>7-22-99</u>	Time: <u>9:40</u>
LOGIN			
TNU W.O. No.	Group No.	Client W.O. No.	
PROGRAM MANAGER			
Sample holding times exceeded?		Yes []	No []
Client Notified: Name _____		Date/time _____	